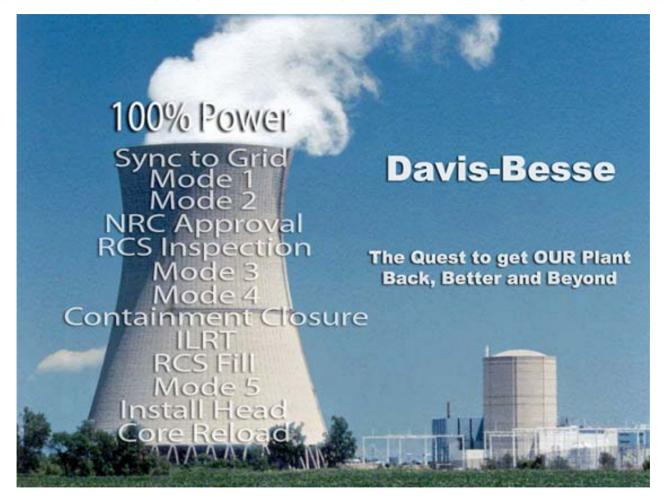


### Davis-Besse Nuclear Power Station



## IMC 0350 Meeting



#### **Desired Outcomes**

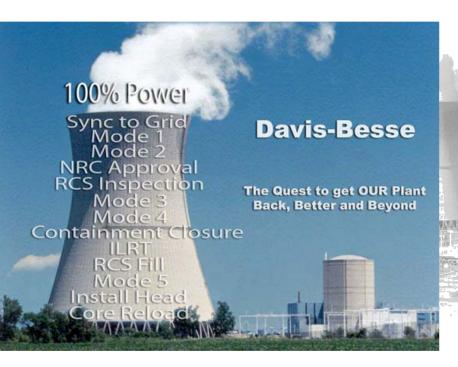
- •Demonstrate that the steps taken to return Davis-Besse to service have been safe and conservative
- •Provide a timeline of startup activities since the last public meeting
- •Provide status on the Cycle 14 Operational Improvement Plan, post-restart actions, and Confirmatory Order

## Lew Myers Chief Operating Officer - FENOC



## Back, Better, and Beyond

#### Milestones



- -March 8 NRC Restart Authorization
- -March 9 Mode 3
- -March 11 Reactor critical (Mode 2)
- -March 14 Mode 1
- -March 16 Synchronized to Grid
- -March 17 Mode 3
- -March 23 Repaired Feedwater Valve 780
- -March 24 Mode 3
- -March 26 Mode 2 / Mode
- -March 27- Final synchronization to grid (end of outage)
- -April 4 -100% power



## Back, Better, and Beyond

#### •Return to Service

- -Plant materiel condition
- -Reactor Coolant System leakrate
- -RCS activity
- -Primary/Secondary Chemistry
- -Operations Performance
- -Employees

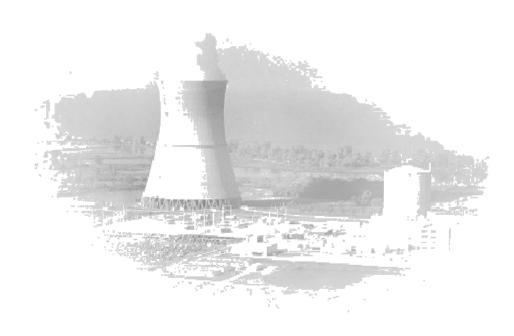
#### **FENOC Vision:**

People with a strong safety focus delivering top fleet operating performance.





#### **Plant Performance**



Mark Bezilla
Vice President





**#1 Startup Transformer** 



#### Accomplishments

- -Successfully completed control rod insertion time testing (Group 1-7)
- -February 12 Request for Restart
- -NRC Emergency Plan Inspection
- –Plant in Mode 3

#### •Challenges

-Restoration of Startup Transformer





**Assembly of Containment Spray Pump** 

#### Accomplishments

- —#1 Containment Spray Pump maintenance
- -Mode 2 Readiness Reviews
- —#1 Decay Heat Pump Quarterly Test
- #1 Auxiliary Feedwater (AFW)Functional Test
- –Plant in Mode 3
- Challenges
  - -Radiation Monitor RE-4597AA (new boards)





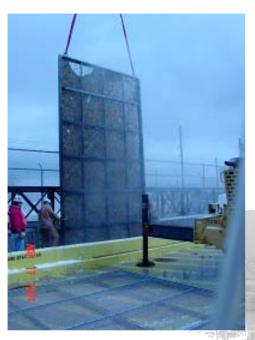
FirstEnergy's CEO Tony Alexander tours Davis-Besse February 26

#### Accomplishments

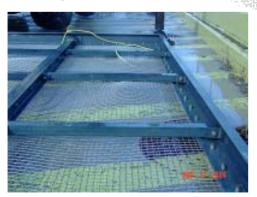
- –Purged air and added hydrogen to Main Generator
- -AFW #1 Monthly Test
- -Received NRC Approval of License Amendment Request for Mid-cycle Steam Generator Inspection
- -Emergency Diesel Generator #1 Monthly Test
- -Steam and Feedwater Rupture Control System and Reactor Protection System Testing
- Received NRC Draft Order for Conditions of Restart
- -Emergency Preparedness Media Tour
- •Challenges
  - -No challenges of note

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Circulating Water intake screens



#### Accomplishments

- Reduction of vibration on CRDM motor generator set
- -Mode 2/1 restraints resolved
- -Closed containment and conducted personnel airlock leakage surveillance
- -Cleaned Circulating Water intake screens

- -Reactor Coolant Pump 1-2 (low motor bearing oil level)
- -Circulating Water pump suction screen (repairs)





**Operators withdraw control rods** 

#### Accomplishments

- -March 8 NRC resolved the issues and removed restrictions for restart
- -Final Restart Readiness Review for Mode 2
- -March 11 entered Mode 2 (reactor critical)
- -Zero power physics testing (ZPPT)
- Conducted senior leadership team(SLT) review of ZPPT

- -Operations concern ~ "estimated critical boron" concentration
  - Operating crew reinserted control rods





Feedwater Valve 780



#### Accomplishments

- -March 14 Mode 1
- –Power increased to ~14%
- -Effectiveness assessment and readiness review prior to generator synchronization
- -March 16 Synchronized Turbine to Grid (~20% Power)
- –March 17 Completed OverspeedTurbine Trip Testing

- -Feedwater Valve 780 (disk/stem separation)
- -Return to Mode 4





**Turbine Bypass Valve** 

#### Accomplishments

- Root Cause Team Assessment
  (Problem-solving and Decision-making) on Feedwater (FW) Valve
  780
- -March 23 Repaired FW Valve 780
- -Restart Readiness Meeting
- -March 26 entered Mode 1
- -March 27 Turbine synchronized to grid

#### Challenges

-Reworked Turbine Bypass Valves





**Reactor Engineers monitor reactivity** 

#### Accomplishments

- -Effectiveness assessment and readiness review prior to 100%
- –Nuclear Instruments and Reactor Protection System calibrations
- -Maintained plant chemistry within limits (iron and silica)
- -INPO Visits
  - -Site Pre-visit
  - -Simulator Observation
  - -AFW Assist Visit

- -Integrated Control System Response
- –Nuclear Instrument Gain Adjustments



## Week of April 4



April 4, 2004 Davis-Besse at 100% power (~ 900 MWE)

#### Accomplishments

- Nuclear Instruments and Reactor
   Protection System calibrations and adjustments
- -Maintained plant chemistry within limits (iron and silica)
- Challenges
  - -D2 Normal Supply Breaker



### **Conclusion**

## FENOC Objectives

Safe Plant Operations

People Development and Effectiveness

Improved Outage Performance

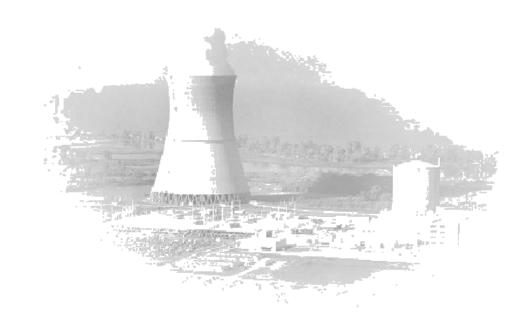
Excellent Materiel Condition

Fleet Efficiency and Effectiveness

•Plant startup and challenges were handled in a safe, deliberate, and conservative manner



# Operational Improvement Plan and Confirmatory Order



Clark Price
Manager - Business Services



## Cycle 14 Operational Improvement Plan

- •Continuation of the Management & Human Performance Improvement Plan
- •Focuses on our four Safety Barriers
  - -Individual
  - -Programs
  - -Management
  - -Oversight
- •Serves to further strengthen and anchor the lessons learned and the corrective actions taken



## Cycle 14 Operational Improvement Plan

- •10 Improvement Initiatives
- •88 Individual Key Actions
- •Performance Indicators designed to monitor our performance in the four Safety Barriers



## Monthly Management Review Meetings

- Attendees
  - -Senior Leadership Team
  - -Site Managers
  - -Other owners of key actions
- •Cycle 14 Operational Improvement Plan
  - -Key Initiative Action Plans
  - -Safety Barrier Performance Indicators
- Integrated Restart Report Commitments
  - -Action Plans
- Safety Culture Monitoring Business Practice





## **Actions for Continuous Improvement**

•Integrated Restart Report dated November 23, 2003 & Supplement to report dated February 6, 2004

-Appendix	A Commitments	36
1 1		

-Closed to date

•Cycle 14 Operational Improvement Plan

<ul><li>Appendix D Commitments</li></ul>	94

-Closed to date 29

Confirmatory Order

-Commitments	6

-Closed to date 0



# Operational Improvement Plan 1<sup>st</sup> Quarter Accomplishments

- Completed several Operations improvement actions
- Developed Forced Outage Schedule template
- Completed SCWE training to expanded population
- Completed SCWE refresher training for supervisors
- Completed qualification of Apparent Cause Evaluators
- Completed Apparent Cause Training to Managers



# Operational Improvement Plan 2<sup>nd</sup> Quarter Highlights

- •Improvements to the Management Observation Program
- Benchmark Conduct of Operations
- •Improvements in Work Management processes
- Develop plans
  - -Improve safety margins for the Top 10 Risk Significant Systems
  - -Reduce and maintain Engineering backlogs
  - -Reduce Condition Report and Corrective Action backlogs
- •Effectiveness assessment of corrective actions taken in response to November 2003 SCWE survey (May)



## Confirmatory Order Requirements (March 8, 2004)

- •Independent annual assessments for 5 years
- •Written plan due to NRC 90 days prior to assessment
- •Assessment report due to NRC within 45 days of completion
- •Mid-cycle inspection of Reactor Pressure Vessel upper and lower head, penetrations, and Control Rod Drive mechanism flanges



## Confirmatory Order Action Plan (March 8, 2004)

- •Clark Price Project Manager
- •Fred von Ahn, FENOC Vice-President of Oversight Executive Sponsor
- •Developing a Business Practice to manage the process
- Approach and Team Composition
- •Tentative Independent Assessments for 2004
  - -Operations Performance (August)
  - -Corrective Action Program Implementation (September)
  - -Engineering Program Effectiveness (October)
  - -Organizational Safety Culture, including SCWE (November)



## **Closing Comments**

### FENOC Vision:

People with a strong safety focus

delivering top fleet operating performance

Lew Myers
Chief Operating Officer - FENOC

FENOC

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